

SAVANNAH RIVER OPERATIONS OFFICE AIKEN, SC 29802

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Recovery Act to Fell Two Cold War Era Reactor Stacks

Aiken, S.C. - Today, the Department of Energy's Savannah River Site (SRS) removed two exhaust stacks from the Site's P & R reactors. With less than 40 pounds of dynamite and in a matter of seconds, the two 145-foot tall, 700-ton stacks that have towered over the P and R Reactors for more than 50 years came down. The demolition is part of an American Recovery and Reinvestment Act project that is decommissioning the two Cold War era reactors.

"Both P & R reactors served the country well during their 30 years of operation to support the Nation's nuclear stockpile," said Zack Smith, the U.S. Department of Energy Recovery Act program director. "Using Recovery Act funds, we are now able permanently decommission these Cold War relics."

This \$185 million Recovery Act demolition project is part of *in situ*, or in-place, decommissioning of the two reactors, a Recovery Act Program managed by Savannah River Nuclear Solutions (SRNS), the SRS management and operations contractor. The project employed 108 people to complete the stack demolition. The rubble from the stacks will be placed below grade and grouted in place at each of the reactors.

"Stack reduction of these two relic reactors brings us closer to fulfilling the Recovery Act program of reducing the SRS operational footprint by 75 percent by 2012," said Dennis Carr, Savannah River Nuclear Solutions' vice president of the Recovery Act portfolio. "The stack blasting is a good example of teamwork and the safe and fitting completion of an important part of SRS history."

In preparation for the demolition, SRNS modified the base of each stack to create "columns" into which they will drill 80 15-inch-deep horizontal holes for explosive loading. The explosive charge was initiated by nonelectric detonators ranging in time from 25-200 milliseconds to assist in controlling the rate and direction of the fall of each stack. Seismographs where used in the

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immediate area to monitor the vibration and air blast generated by the demolition. The P Reactor stack fell first, followed by the R Reactor stack. A video of the demolition is available [here].

The demolitions were performed by Controlled Demolition, Inc. (CDI), the contractor that also felled the 52-million-pound, 450-foot-high and 345-foot-wide K Cooling Tower in May.

In the ongoing phase of *in situ* decommissioning, the reactors' underground structures will be filled with an estimated 260,000 cubic yards of concrete grout. This will seal the structures and leave them safely intact for an estimated 1,400 years. The reactor buildings themselves will have little or no maintenance performed on them in the future.

While the reactors were operational, the P and R reactor stacks were used as the outlet for the exhaust from the reactor buildings. R Reactor was shut down in 1964, and P Reactor was shut down in 1988. If left in place, the height and configuration of the reactors' exhaust stacks could pose serious risk due to degradation and possible collapse in the future. Removing them mitigates that risk.

Additional information on the Department of Energy's Office of Environmental Management and the Savannah River Site can be found at http://www.em.doe.gov or http://www.srs.gov. For more information about the SRS Recovery Act Project, please visit www.srs.gov/recovery/and-for-more information about awarded contracts, please see www.srs.gov/recovery/procurement-contracts.

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